



Patitioner's Docket No. 50369-CPA (70329)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Pavelchek  
Application No.: 09/330,417  
Filed: June 11, 1999  
For: ANTIREFLECTIVE HARD MASK COMPOSITION

Group No.: 1746  
Examiner: M. Kornakov

NOTE: "In addition to identifying the application number of the prior application, applicant should furnish in the request for an application under this paragraph the following information relating to the prior application to the best of his or her ability: (i) Title of invention; (ii) Name of applicant(s); and (iii) Correspondence address." 37 CFR 1.53(d)(8).

Box CPA  
Commissioner of Patents and Trademarks  
Washington, D.C. 20231

CONTINUED PROSECUTION APPLICATION (CPA)  
(37 CFR 1.53(d))

CERTIFICATION UNDER 37 C.F.R. 1.8(a) and 1.10\*  
(When using Express Mail, the Express Mail label number is **mandatory**;  
Express Mail certification is optional.)

RECEIVED  
AUG 30 2002  
TC 1700

I hereby certify that, on the date shown below, this correspondence is being:

MAILING

X deposited with the United States Postal Service in an envelope addressed to the Commissioner for Patents and Trademarks, Washington, D.C. 20231.

37 C.F.R. 1.8(a)

37 C.F.R. 1.10\*

☐ with sufficient postage as first class mail.

X as "Express Mail Post Office to Addressee"  
Mailing Label No. **EL933040228US (mandatory)**

TRANSMISSION

☐ transmitted by facsimile to the Patent and Trademark Office.

Signature

Date: 8/26/02

Peter F. Corless  
(type or print name of person certifying)

**\*WARNING:** Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. 1.10(b).  
"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

(Continued Prosecution Application (CPA) (37 CFR 1.53(d))—page 1 of 7)

08/29/2002 AWONDAF1 00000175 09330417

01 FC:131

740.00 OP

**NOTE:** *A continued prosecution application can only be filed for a divisional or continuation of a prior nonprovisional application and can **NOT** be filed for a continuation-in-part application. 37 CFR 1.53(d)(1).*

**NOTE:** *Facsimile transmission **can** be used to obtain a **date of transmission** for this correspondence 37 CFR 1.8(b)(3).*

**WARNING:** *A continued prosecution application "Is a request to expressly abandon the prior application" as of its filing date. 37 CFR 1.53(d)(2)(v).*

**WARNING:** *While the filing of a continued prosecution application is the specific reference required by 35 U.S.C. § 120 to every application assigned the application number identified in such request, no amendment in the application may delete the specific reference to any prior application (e.g., for patent term purposes). 37 CFR 1.53(d)(7).*

1. This is a request for a filing of a

- ☒ continuation  
☐ divisional

continued prosecution application under 37 CFR 1.53(d) of the above identified prior nonprovisional application.

It is further requested that this continued prosecution application utilize the file jacket and contents of the prior application, including the specification, drawings and oath or declaration from the prior application, to constitute this new application, and that the application number of the above identified prior application be assigned for identification purposes. 37 CFR 1.53(d)(2)(iv).

It is also requested that the above identified application be expressly abandoned as of the filing date accorded this continued prosecution application. 37 CFR 1.53(d)(2)(v).

2. With respect to the above identified nonprovisional application this continued prosecution application is being filed:

- A. ☒ before the earliest of the:  
☐ termination of the proceedings on the prior application. 37 CFR 1.53(d)(1)(ii)(C).  
☐ payment of the issue fee thereon. 37 CFR 1.53(d)(1)(ii)(A).  
☒ abandonment of the prior application. 37 CFR 1.53(d)(1)(ii)(B).

**OR**

B. ☐ after the payment of the issue fee but a petition under § 1.313(b)(5) has been granted in the prior application. 37 CFR 1.53(d)(1)(ii)(A).

C. The term for response or taking action in the prior application expires on 8/19/02.

☒ An extension of time in the prior application is:

☒ filed concurrently in the prior application (a copy of which is enclosed).

[ ] has been filed on \_\_\_\_\_.

3. It is noted that:

- This application discloses and claims only subject matter disclosed in the prior application. 37 CFR 1.53(d)(2)(ii).
- Filing of this continued prosecution application is to be construed to include a waiver of confidentiality by the applicant under 35 U.S.C. § 122 to the extent that any member of the public, who is entitled under the provisions of § 1.14 to access to, copies of, or information concerning either the prior application or any continuing application filed under the provisions of 37 CFR 1.53(d), may be given similar access to, copies of, or similar information concerning the other application or applications in the file jacket. 37 CFR 1.53(d)(6).
- Filing of this request is the specific reference required by 35 U.S.C. § 120 to every application assigned the application number identified in this request and that no amendment in this application may delete this specific reference to any prior application. 37 CFR 1.53(d)(7) and 1.78(a)(2).

4. This continued prosecution application names as inventors:

[X] the same inventors named in the prior application on the date this continued prosecution application under 37 CFR 1.53(d) is being filed. 37 CFR 1.53(d)(4).

[ ] inventors fewer than all the inventors named in the prior application. 37 CFR 1.53(d).

[ ] please delete the following name(s) as inventor(s):

\_\_\_\_\_  
\_\_\_\_\_

*NOTE: "No person may be named as an inventor in an application filed under this paragraph who was not named as an inventor in the prior application on the date the application under this paragraph was filed, except by way of a petition under § 1.48." 37 CFR 1.53(d)(4).*

5. An Amendment is enclosed.

*NOTE: "Any new change must be made in the form of an amendment to the prior application as it existed prior to the filing of an application under this paragraph. No amendment in an application under this paragraph (a continued prosecution application) may introduce new matter or matter that would have been new matter in the prior application. Any new specification filed with the request for an application under this paragraph will not be considered part of the original application papers, but will be treated as a substitute specification in accordance with § 1.125." 37 CFR 1.53(d)(5).*

## 6. Fee Calculation

NOTE: "(3) The filing fee for a continued prosecution application filed under this paragraph is:

(i) The basic filing fee as set forth in § 1.16; and

(ii) Any additional § 1.16 fee due based on the number of claims remaining in the application after entry of any amendment accompanying the request for an application under this paragraph and entry of any amendments under § 1.116 unentered in the prior application which applicant has requested to be entered in the continued prosecution application."

37 CFR 1.53(d)(3)(i) and (ii).

A. ☒ Regular application

CLAIMS AS FILED					
Claims	Number Filed	Basic Fee Allowance	Number Extra	Rate	Basic Fee 37 C.F.R. 1.16(a) \$740.00
Total Claims (37 CFR 1.16(c))		- 20 = 0	0	\$ 18.00	\$0
Independent Claims (37 CFR 1.16(b))		- 3 = 0	x	\$ 84.00	\$0
Multiple Dependent Claim(s), if any (37 CFR 1.16(d))			+	\$280.00	\$0

- ☐ Amendment cancelling extra claims is enclosed.  
☐ Amendment deleting multiple-dependencies is enclosed.  
☐ Fee for extra claims is not being paid at this time.

NOTE: If the fees for extra claims are not paid on filing they must be paid or the claims cancelled by amendment, prior to the expiration of the time period set for response by the Patent and Trademark Office in any notice of fee deficiency. 37 CFR 1.16(d).

Filing Fee Calculation \$ 740.00

B. ☐ Design application  
(\$330.00--37 CFR 1.16(f))

Filing Fee Calculation \$ \_\_\_\_\_

C. ☐ Plant application  
(\$540.00--37 CFR 1.16(g))

Filing Fee Calculation \$ \_\_\_\_\_

**7. Small Entity Statement(s)**

☐ Statement(s) that this is a filing by a small entity under 37 CFR 1.9 and 1.27.

**WARNING:** "... Status as a small entity must be specifically established in each application or patent in which the status is available and desired. Status as a small entity in one application or patent does not affect any other application or patent, including applications or patents which are directly or indirectly dependent upon the application or patent in which the status has been established. The refiling of an application under § 1.53 as a continuation, division, or continuation-in-part (including a continued prosecution application under § 1.53(d)), or the filing of a reissue application requires a new determination as to continued entitlement to small entity status for the continuing or reissue application. A nonprovisional application claiming benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) of a prior application, or a reissue application may rely on a statement filed in the prior application or in the patent if the nonprovisional application or the reissue application includes a reference to the statement in the prior application or in the patent or includes a copy of the statement in the prior application or in the patent and status as a small entity is still proper and desired. . . ." 37 CFR 1.28(a)(2).

*(complete the following, if applicable)*

Filing Fee Calculation (50% of A, B or C above)

Filing Fee Calculation \$ \_\_\_\_\_

**NOTE:** Any excess of the full fee paid will be refunded if a small entity statement and a refund request are filed within 2 months of the date of timely payment of a full fee. The two-month period is not extendable under § 1.136. 37 CFR 1.28(a).

**8. Fee Payment Being Made at This Time**

☐ Not Enclosed

☐ No filing fee is to be paid at this time.

*(This and the surcharge required by 37 C.F.R. 1.16(e) can be paid subsequently.)*

☒ Enclosed

☒ Filing fee \$ 740.00

☐ Recording assignment  
(\$40.00; 37 C.F.R. 1.21(h))  
(See attached "COVER SHEET FOR ASSIGNMENT  
ACCOMPANYING NEW APPLICATION.") \$ \_\_\_\_\_

☐ Petition fee for filing by other than all the  
inventors or person on behalf of the inventor  
where inventor refused to sign or cannot be reached  
(\$130.00; 37 C.F.R. 1.47 and 1.17(i)) \$ \_\_\_\_\_

**Total fees enclosed** \$ 740.00

## 9. Method of Payment of Fees

- ☒ Check in the amount of \$ 740.00.
- ☐ Charge Account No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_.
- A duplicate of this transmittal is attached.

**NOTE:** Fees should be itemized in such a manner that it is clear for which purpose the fees are paid. 37 CFR 1.22(b).

**WARNING:** Unless an application under § 1.53(d) filed by facsimile includes an authorization to charge the basic filing fee to a deposit account, the applicant will be given a notification requiring payment of the appropriate filing fee (§ 1.53(d)(3)) and the late filing surcharge under § 1.16(e) to avoid abandonment of the § 1.53(d) application. Notice of Oct 10, 1997, 62 F.R. 53,131, 53,133.

## 10. Authorization to Charge Additional Fees

**WARNING:** If no fees are to be paid on filing, the following items should not be completed.

**WARNING :** Accurately count claims, especially multiple dependent claims, to avoid unexpected high charges, if extra claim charges are authorized.

- ☒ The Commissioner is hereby authorized to charge the following additional fees by this paper and during the entire pendency of this application to Account No. 04-1105 .

- ☒ 37 C.F.R. 1.16(a), (f) or (g) (filing fees)
- ☒ 37 C.F.R. 1.16(b), (c) and (d) (presentation of extra claims)

**NOTE:** Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 CFR 1.16(d)), it might be best not to authorize the PTO to charge additional claim fees, except possibly when dealing with amendments after final action.

- ☒ 37 C.F.R. 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)
- ☒ 37 C.F.R. 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a))
- ☒ 37 C.F.R. 1.17 (application processing fees)

**WARNING:** "A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 CFR 1.136(a)(3).

- ☐ 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))

**NOTE:** *Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 CFR 1.311(b).*

**NOTE:** *37 CFR 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application . . . prior to paying, or at the time of paying, . . . issue fee." From the wording of 37 CFR 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.*

## **11. Instructions as to Overpayment**

**NOTE:** *"Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 CFR 1.26(a).*

☒ Credit Account No. 04-1105  
☐ Refund

Reg. No. 33,860

Tel. No. (617) 439-4444

Customer No. 21874

  
\_\_\_\_\_  
**SIGNATURE OF PRACTITIONER**

Peter F. Corless  
*(type or print name of practitioner)*

EDWARDS & ANGELL, LLP  
P.O. Box 9169  
P.O. Address

Boston, Massachusetts 02209



Docket No. 50369

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: E. Pavelchek  
SERIAL NO.: 09/330,417 GROUP: 1746  
FILED: June 11, 1999 EXAMINER: M. Kornakov  
FOR: ANTIREFLECTIVE HARD MASK COMPOSITIONS

THE HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS  
WASHINGTON, DC 20231

SIR:

RECEIVED  
AUG 30 2002  
TC 1700

AMENDMENT

Applicant files a Continuation Prosecution Application (CPA) herewith. Please amend the application as follows.

IN THE CLAIMS

Please cancel claims 13, 18 and 19 without prejudice.

1. (amended) A method for etching a dielectric layer overlying an integrated circuit or electronic packaging substrate, comprising:
- (a) providing an integrated circuit substrate having a dielectric layer thereof;
  - (b) over the dielectric layer, depositing a coating layer of an inorganic antireflective hard mask composition that comprises one or more inorganic elements selected from Group IIIa, IVa, Va, VIIa, VIII, Ib, IIb, IIIb, IVb, or Vb of the Periodic Table, the antireflective composition comprising at least about 5 mole percent of inorganic atoms, based on the resin component of the antireflective composition;
  - (c) depositing a coating layer of a photoresist composition over the antireflective hard mask composition coating layer;
  - (d) exposing to patterned radiation and developing the photoresist coating layer to form a photoresist relief image over the antireflective hard mask composition;
  - (e) etching the antireflective hard mask composition to form a relief image thereof;

08/30/2002 ASINLET 04000002 041105 09/330,417

01 FC:103

mask composition coating layer;